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**United States Patent** [19][11] **Patent Number:** **6,028,183****Lin et al.**[45] **Date of Patent:** **Feb. 22, 2000**[54] **PYRIMIDINE DERIVATIVES AND OLIGONUCLEOTIDES CONTAINING SAME**[75] **Inventors:** Kuei-Ying Lin, Fremont; Mark D. Matteucci, Portola Valley, both of Calif.[73] **Assignee:** Gilead Sciences, Inc., Foster City, Calif.[21] **Appl. No.:** 08/966,392[22] **Filed:** Nov. 7, 1997[51] **Int. Cl.<sup>7</sup>** ..... C07H 19/00; C07H 21/00[52] **U.S. Cl.** ..... 536/22.1; 536/23.1; 536/25.3; 536/25.31; 536/25.32; 536/25.34; 536/25.4; 435/6; 435/87; 435/90; 544/249[58] **Field of Search** ..... 536/22.1, 23.1, 536/25.3, 25.31, 25.32, 25.34, 25.4; 435/6, 87, 90; 544/249[56] **References Cited****U.S. PATENT DOCUMENTS**

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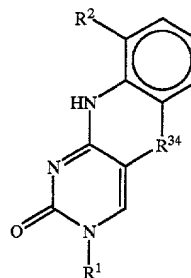
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[57] **ABSTRACT**

Compounds having structure (1)

(1)



wherein R<sup>1</sup> is —H a protecting group, a linker or a binding partner; and R<sup>2</sup> and R<sup>34</sup> are as defined in the specification. The invention also provides intermediates and methods make the structure (1) compounds, as well as methods to use the compounds as labels in diagnostic assays and to enhance binding to complementary bases.

**30 Claims, No Drawings**